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EXAMINER	
SKRIPNIKOV, ALEX	
ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/500,657	BERWANGER ET AL.	
	Examiner	Art Unit	
	Alex Skripnikov	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 February 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on February 29, 2008 have been fully considered but they are not persuasive:

As to claims **13-15 and 20-23**:

2. On page 9 of the Applicant's Response, applicant argues: "reference Weigl et al refers to the so-called TTCAN (time triggered controller area network)-data bus. In particular, the reference is directed to the synchronization of local clocks (UI to 1Z4) of the bus users (101 to 105) onto a global clock (gZ). In contrast thereto, the principle idea of the present invention is to transmit messages from different bus users in the same timeslot of a data frame in different communication cycles".

3. Examiner agrees with applicant that there are substantial differences between the disclosure of Weigl et al. with respect to the present patent, however, such differences do not appear recited in claims **13-15** and **20-23**, furthermore, such differences recited in claims **16-19** and **24-31** are obvious over Weigl et al. in view of Stoneking et al.

4. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *transmission of messages from different bus users in the same timeslot of a data frame in different communication cycles*) are not recited in the rejected claim(s). For instance, *"transmission of messages from different bus users in the same timeslot of a data frame in different communication cycles"* are substantially different from *"that at least one of the timeslots (5) of one timeframe (4) can be used, in various cycles, for offset transmission of different messages (Ni) that are not intended for transmission in every cycle"*. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The use of reference characters in claims 13 and 20-31 is to be considered as having no effect on the scope of the claims. See MPEP 608.01(m).

5. According to the Authoritative Dictionary of IEEE Standards Terms, term "cycle" means "an interval of space or time in which one set of events or phenomena is completed". The examiner broadly interpreted phrase "in various cycles" as "in various intervals of time in which one set of events (transmitting useful data) is completed" in the light of applicant's disclosure ((1024 cycles are shown); Fig.2; [0043]; The specification of applicant's invention). Furthermore, The Specification of applicant's invention discloses that the users of the communication system are each allocated at least one predeterminable timeslot of the timeframe for data transmission. This means that within one timeslot in different cycles, while different messages can be transmitted, **these messages are all sent from the same user** ([0021]; the specification of applicant's invention).

6. Weigl et al. clearly shows on Fig.4 that at least one of the timeslots of one timeframe can be used, in various cycles, for offset transmission of different messages that are not intended for transmission in every cycle (Weigl et al.; column 6, lines 19-27; shown on Fig.4 in timing window ZF5a, different messages (B,C) are transmitted offset (not transmitted in every cycle (time window 417 left blank (neither B nor C is transmitted); Fig. 4; Weigl et al.))).

As to claims **16-19 and 24-41**:

7. On page 11 of the Applicant's Response, applicant argues: "*Even if Stoneking et al can be combined with Weigl et al to result in the combination proposed by the examiner, the addition of Stoneking et al does not make up for the shortcomings of Weigl et al with respect to the requirements of claims 13 and 20, that at least one of the timeslots (5) of one timeframe (4) can be used, in various cycles, for offset transmission of different messages (Ni) that are not intended for transmission in every cycle, as discussed above*". The examiner respectfully disagrees with applicant's argument, because Weigl et al. discloses that at least one of the timeslots (5) of one timeframe (4) can be used, in various cycles, for offset transmission of different messages (Ni) that are not intended for transmission in every cycle, as outlined above.

Claim Objections

8. Claims **13 and 20-31** are objected to because of the following informalities: claims contain references to the figures. Where possible, claims are to be complete in themselves. Incorporation by reference to a specific figure or table "is permitted only in exceptional circumstances where there is no practical way to define the invention in words and where it is more concise to incorporate by reference than duplicating a drawing or table into the claim. Incorporation by reference is a necessity doctrine, not for applicant's convenience." Ex parte Fressola, 27 USPQ2d 1608, 1609 (Bd. Pat. App. & Inter. 1993). The use of reference characters is to be considered as having no effect on the scope of the claims. See MPEP 608.01(m). Applicant is encouraged to delete references to the figures from claims.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims **13-15** and **20-23** are rejected under 35 U.S.C. 102(e) as being anticipated by **Weigl et al. US Patent No. US 6,842,808 B2**.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

As to claims **13** and **20**:

Weigl et al. discloses a method and a device for the exchange of data in messages, including a data bus and the users connected to it (Weigl et al.; column 1, lines 44-48), in which the data transmission is effected within cyclically repeating timeframes (first or base cycles) (Weigl et al.; column 2, lines 24-35, line 56-57; Fig 4, BZ0a-BZ7a) with at least two timeslots (timing windows) each (Weigl et al.; column 3,

lines 20-22; (shown as timing window on Fig. 2)) , and each timeslot is intended for transmitting one message (Weigl et al.; column 3, lines 22-24), one message (Ni) contains at least some of the useful data (Weigl et al.; column 6, lines 28-30), and each message is assigned an identifier (Weigl et al.; column 6, lines 28-30), characterized in that the identifier is stored in each message as part of the message (Weigl et al.; column 6, lines 28-30); that each message additionally includes data about the cycle ((base mark, rate of repetition) Weigl et al.; column 6, lines 28-33); that the timeslots have a fixed length (Weigl et al.; column 5, lines 6-9; timing windows are also shown fixed on Fig. 2); and that at least one of the timeslots of one timeframe can be used, in various cycles, for offset transmission of different messages that are not intended for transmission in every cycle (Weigl et al.; column 6, lines 19-27; shown on Fig.4 in timing window ZF5a, different messages (B,C) are transmitted offset (not transmitted in every cycle)).

As to claim **21**:

Weigl et al. discloses that the users of the communication system are each allocated at least one predeterminable timeslot of the timeframes (component of transmission matrix) for data transmission. (Weigl et al.; column 6, lines 1-4; transmission groups also shown on Fig.4).

As to claims **14**, **15, 22** and **23**:

Weigl et al. discloses that the message includes data about the cycle (base mark (an ordinal number of cycle in which the message is sent first), rate of repetition (defines after how many cycles **this** (current) transmission is repeated)) (Weigl et al.; column 6,

lines 28-42). Therefore, data about the cycle pertain to the message and therefore pertain to the current cycle in which the message is sent and include an ordinal number of the cycle.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims **16-19** and **24-31** are rejected under 35 U.S.C. 103(a) as being obvious over **Weigl et al. US Patent No. US 6,842,808 B2** in view of **Stoneking et al. US Patent No. 6,606,670 B1**.

As to claims 16-19:

Weigl et al. discloses the claimed invention above. In addition to Weigl et al. also teaches that the message includes the time data (timing window) which include data about the chronological position of a timeslot within a timeframe (Weigl et al.; column 6, lines 28-37).

Weigl et al. fails to teach that time data can be learned from the identifier; that cycle data are stored in memory in a message as part of the identifier of that message.

However, Stoneking et al. discloses that any convenient fields and message format may be used depending on the particular implementation contemplated (Stoneking et al.; column 5, lines 6-8). Stoneking et al. discloses that message identifier used together with other field (RTR bit) for the purpose of message arbitration. (Stoneking et al.; column 5, lines 15-28; Arbitration Field (identifier associated with other fields) (154) is shown on Fig. 2A, 2B).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to access identifier field and supplemented (timing window or (base mark and rate of repetition)) fields described by Weigl et al. in a

combination thereof decribed by Stoneking et al. in order to arbitrate messages (Stoneking et al.; column 5, lines 15-28).

Furthermore, It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to retrieve the time data from the identifier combined with the timing window field.

As to claims 24-31:

Weigl et al. and Stoneking et al. disclose the claimed invention above. In addition to Weidl et al. also teaches that the current cycle data are monitored by the users (reference message received by all nodes and include number of instantaneous cycle (Weigl et al.; column 4, lines 23-30)); predeterminable value stored in a memory of the user for the cycle data (watchdog Weigl et al.; column 4, lines 44-49); a message is sent by a user in a predeterminable timeslot only if the current cycle data match a predeterminable value, stored in a memory of the user, for the cycle data (watchdog is actuated Weigl et al.; column 4, lines 61-65).

Weidl et al. fails to teach that the messages (data traffic) are observed by the users of the communication system; that the identifiers and the cycle data of the messages are compared with predeterminable values, stored in memories of the observing users, for the identifier and the cycle data, and at least the useful data of a transmitted message are received by the user only if the identifier and the cycle data of the message match the predeterminable values, stored in the memory of the user, for the identifier and the cycle data.

However, Stoneking et al. discloses that each message includes a message ID; In order to determine whether to process a received message, each node examines the message ID from the message; each node is configured to process messages whose message IDs meet predetermined criteria; these criteria may be, for example, that the message ID is one in a defined set, is within a certain numeric range or outside of a certain numeric range; If the extracted message ID meets the predetermined criteria, then the receiving node processes the message (Stoneking et al. column 4, lines 50-58); if a particular node receives a message with a message ID that it is not configured to process, it will not process the message. If, however, a node receives a message with a message ID that it is configured to process, the node will process the message (Stoneking et al. column 7, lines 28-38); the device 400 (Stoneking et al.; Fig 5.) may include receive buffers, at least one acceptance mask and at least one filter; the mask defines a bit pattern associated with a message ID that either should be accepted or rejected; the mask bits are applied to filters which then perform the function of accepting or rejecting an incoming message-based on whether the message ID of the message meets a predetermined criteria defined by the mask (Stoneking et al.; column 10, lines 54-62); in a message-based network, messages are transmitted to all nodes in the network; each node must then determine whether to accept and process a message or ignore the message (Stoneking et al. column 1, lines 24-27) for the purpose of allowing coordinated control of many control nodes within the system (Stoneking et al. column 1, lines 29-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to update method of exchange of data described by Weidl et al. such that to update nodes to process only those messages which are configured to process (meet predetermined criteria) and include an acceptance mask to the nodes described by Stoneking et al. in order to allow coordinated control of many control nodes within the system (Stoneking et al. column 1, lines 29-31).

Conclusion

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex Skripnikov whose telephone number is (571)270-

1958. The examiner can normally be reached on Monday to Thursday 9:00 a.m. to 5 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

April 10, 2008

/Alex Skripnikov/
Examiner, Art Unit 2616

/Huy D. Vu/

Supervisory Patent Examiner, Art Unit 2616